

Applicants respectfully traverse the rejections of claims 1-28, 30 and 31 under 35 U.S.C. § 102(b) over U.S. Patent No. 5,738,395 to Probst.

The internal and integral ridge of the container according to the present invention acts as an in-built longitudinal structural stiffener. This helps ensure that the strength, fatigue resistance and buckling capacity of the container are met without compromising the loading capacity of the container when compared to a conventionally constructed container of the same exterior dimensions (see, for example, Figure 5). The container of the present application provides an advantage in that containers for transporting bulk materials commonly have size and design constraints put on them. Thus, it has been found that in order to maximize load carrying capacity it would be advantageous to strengthen the walls with the addition of an internal integral ridge to help to maximize the strength and size, and therefore carrying capacity, of the container without adding significant constructional costs or extending beyond dimensional limits.

"For a prior art reference to anticipate in terms of 35 U.S.C. §102, every element of the claimed invention must be identically shown in a single reference." Diversitech Corp. v. Century Steps, Inc., 840 F.2d 675, 677, 7 U.S.P.Q. 2d 1315, 1317 (Fed. Cir. 1988).

Applicants submit that Probst fails to disclose each element of independent claims 1 and 2.

Regarding independent claim 1, and claims 6-28, 30 and 31 which depend therefrom, Applicants submit that Probst fails to disclose an internal ridge running along a side wall between two end walls, or such a ridge integrally formed within the side wall. This reference clearly shows that the cylindrical lower portion of its dumpster, which has only a single wall (i.e., it does not have separately definable side and end walls), is smoothly merged into the rectangular upper portion of the dumpster near the center of each wall of the upper portion, and thus it is clear that no internal ridge running along a side wall is disclosed by this reference. Further, Probst fails to teach that an integrally-formed internal ridge running along a side wall between two end walls projects from the side wall a distance which is greater than the thickness of the side wall. For these reasons, Applicants submit, none of claims 1, 6-28, 30 and 31 is anticipated by Probst under § 102(b). Applicants request that the rejections of these claims under § 102 now be withdrawn.

Applicants further submit that this reference also fails to suggest the desirability of modifying its dumpster to provide such a ridge. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious

unless the prior art suggested the desirability of the modification." In re Fritch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992) (citing In re Gordon, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)). Therefore, Applicants submit, neither independent claim 1, nor any claim depending therefrom, may be rendered obvious under § 103 over Probst.

The Examiner is respectfully reminded that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so." In re Fritch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783-1784 (Fed. Cir. 1992).

Moreover, Applicants submit that one of ordinary skill in the art working on the problem of improving the efficiency and cost-effectiveness of bulk transport containers of the type described in the present application would not even consider the Probst reference in addressing this problem. Probst is simply not relevant to the technical field of containers for transporting bulk materials, such as for use in road and rail transportation. For "the teachings of a reference to be prior art under 35 U.S.C. 103, there must be some basis for concluding that the reference would have been considered by one skilled in the particular art working on the pertinent problem to which the invention pertains". In re Horn et al., 203 U.S.P.Q. 969, 971 (C.C.P.A. 1979). The court continues:

For no matter what a reference teaches, it could not have rendered obvious anything at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains unless said hypothetical person would have considered it.

See also Ex parte Clapp, 227 U.S.P.Q. 973 (Bd. App. 1985) (citing In re Horn with approval.).

The "dumpable rubbish container shown in Figures 1-4" of Probst is "of conventional, relatively small, wheeled, residential type" (column 2, lines 66-67) and therefore clearly not intended as a container for transporting bulk materials. Rather, it is merely for receiving and holding garbage and other trash for collection by a "conventional automated garbage truck" (column 3, line 4). In use, a garbage truck unloads the garbage from the dumpable container and transports the garbage away for disposal whilst leaving the dumpster behind.

Furthermore, Applicants submit that "garbage" or "trash" are not properly defined as "bulk materials" in the context of the present application. Rather, "bulk" materials would be understood by those skilled in the art to refer to substantial quantities of cargo such as, for example, grain, ore, coal, ... etc.... A "dumpster" such as taught by Probst, on the other hand, is intended to hold household or retail trash or garbage.

Because there is no basis for concluding that Probst would have been considered by one skilled in the particular art working on the pertinent problem to which the invention pertains, Applicants submit that a rejection of any of claims 1, 6-28, 30 and 31 under § 103 over Probst would be improper.

Regarding independent claim 2 and claims 3-5 which depend therefrom, Applicants submit that Probst fails to disclose a plurality of vertical reinforcing members spaced along the length of a side wall, wherein the side wall between adjacent ones of the reinforcing members includes an integrally-formed internal ridge running therebetween. Nor, as pointed out above, does Probst teach such an integrally-formed internal ridge projecting from a side wall a distance which is greater than the thickness of the side wall. Because Probst fails to identically show every element of claim 2, none of claims 2-5 is anticipated by this reference under § 102(b). Applicants therefore request that this basis for rejection of claims 2-5 now be withdrawn.

Moreover, Applicants submit that Probst fails to provide any suggestion of or incentive for providing a plurality of vertical reinforcing members spaced along the length of a side wall, or an internal ridge integrally formed in the side wall which runs between adjacent ones of the vertical reinforcing members. The reference provides no suggestion that fixtures 33 of the dumpster of Probst serve as a reinforcing means, contrary to the Examiner's contention. Probst discloses merely that "fixtures 33 [are] for receiving the arms of an automated garbage truck in the raising and tipping of the rubbish-receiving dumpster container 30." (Column 4, lines 15-17.)

Further, as disclosed by Figure 4, arms 10c of the garbage truck engage cylindrical lower portion 10b. With reference to Figure 7, the location of fixtures 33 would thus appear to be on cylindrical lower portion 10b, the fixtures located on opposite circumferential sides of the cylindrical dumpster. Even if fixtures 33 were somehow construed as being adjacent and the side wall was the circumferential surface of cylindrical lower portion 10b, this reference provides no suggestion that an internal, integrally formed ridge formed in the

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cylindrical side wall runs between fixtures 33. The Examiner is also respectfully reminded that "[i]t is impermissible to first ascertain what Applicants *did* and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct appellants' invention from such prior art." Panduit Corp. v. Dennison Mfg. Co., 774 F.2d 1082, 1092, 227 U.S.P.Q. 337, 343 (Fed. Cir. 1985) (quoting In re Shuman, 361 F.2d 1008, 1012, 150 U.S.P.Q. 54, 57 (CCPA 1966)). Applicants therefore submit that none of claims 2-5 can be properly rendered obvious over Probst under § 103.

For the above reasons, Applicants submit that each of the pending claims is in condition for allowance. Applicants request that all rejections of these claims now be withdrawn, and that these claims be allowed.

In the event Applicants have overlooked the need for an extension of time, payment of fee, or additional payment of fee, Applicants hereby petition therefor and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

The Examiner is respectfully invited to telephone the undersigned at 260-424-8000 if there are any questions regarding any of the above.

Respectfully submitted,



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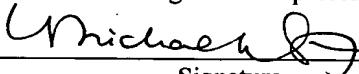
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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on: September 25, 2002.

MICHAEL D. SMITH, REG. NO. 40,181

Name of Registered Representative



Signature

September 25, 2002

Date

ATTACHMENT I

Revisions to Specification in U.S. Pat. App. S/N 09/647,670
Requested September 25, 2002

The paragraph between lines 13 and 17 of page 5:

As seen in Figure 7, the natural angle of repose 13 is dependent on the product 12 desired to be carried, and can be determined by pouring or dropping the material 12 [on to] onto a level [plain] plane so as to form a substantially conical hill. The angle of repose 13 is then determined as the angle between the horizontal [plain] plane 15, and a line extending from the base of the cone to the top of the hill.



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ATTACHMENT II

Status of Claims Pending in U.S. Pat. App. S/N 09/647,670
As of September 25, 2002

✓ 1. (Amended) A container for transporting bulk material including two side walls, two end walls and a base, wherein at least one said side wall includes at least one internal ridge running along said at least one side wall between said end walls, and wherein said ridge is integrally formed within said at least one side wall and the distance from which said ridge projects from said side wall is greater than the thickness of said side wall.

± 2. (Amended) A container for transporting bulk material including two side walls, two end walls, and a base; said side walls including a plurality of vertical reinforcing members spaced along the length of said side wall, wherein said side wall between at least one adjacent pair of said reinforcing members includes at least one internal ridge running therebetween, wherein said ridge is integrally formed within said side wall and the distance from which said ridge projects from said side wall is greater than the thickness of said side wall.

± 3. A container as claimed in claim 2 further including at least one internal ridge between each of said reinforcing members.

± 4. (Amended) A container as claimed in claim 2 including additional reinforcement aligned along said internal ridge between each of said reinforcing members.

± 5. (Amended) A container as claimed in claim 2, further including at least one internal ridge between on said end wall and a first reinforcing member.

✗ 6. (Amended) A container as claimed in claim 1 wherein said ridge includes a first wall portion angled from said wall towards the interior of said container, and a second wall portion rejoining said first wall portion to said wall.

± 7. (Amended) A container as claimed in claim 1, adapted for unloading of material through the base of the container, wherein said ridge includes a first wall portion angled from said wall away from the interior of said container, and a second wall portion rejoining said first wall portion to said wall.

± 8. (Amended) A container as claimed in claim 6 wherein the angle of said first wall portion is in the direction of flow during unloading of the material to be transported.

± 9. (Amended) A container as claimed in claim 1, wherein said internal ridge includes a fist wall portion deflected inwardly a progressively increased degree relative to the intersection of said side wall and said base, and a second wall portion extending from said

first wall portion and being deflected outwardly a progressively decreased degree relative to the intersection of said side wall and said base.

≤ 10. (Twice Amended) A container as claimed in claim 6 wherein said first wall portion extends from said side wall at an angle ϕ_1 , wherein:

$$\phi_1 \leq \phi_2 - \phi_3 - 90^\circ$$

where:

ϕ_1 - is the angle between said side wall and said first wall portion,

ϕ_2 - is the angle said container is rotated during unloading of said container, and

ϕ_3 - is the natural angle of repose of material to be transported in said container.

≤ 11. (Twice Amended) A container as claimed in claim 6 wherein said first wall portion extends from said side wall at an angle ϕ_1 , wherein:

$$\phi_1 \leq \phi_2 - \phi_3 - \phi_4 - 90^\circ$$

where:

ϕ_1 - is the angle between said side wall and said first wall portion,

ϕ_2 - is the angle said container is rotated during unloading of said container,

ϕ_3 - is the natural angle of repose of material to be transported in said container, and

ϕ_4 - is the cohesion of said material to be transported when wet.

≤ 12. (Twice Amended) A container as claimed in claim 6 adapted for unloading of material through the base of the container, and wherein said first wall portion extends from said side wall at an angle ϕ_1 , wherein:

$$\phi_1 \leq 90^\circ - \phi_3$$

ϕ_1 - is the angle between said side wall and said first wall portion, and

ϕ_3 - is the natural angle of repose of material to be transported in said container.

≤ 13. (Twice Amended) A container as claimed in claim 6 adapted for unloading of material through the base container, and wherein said first wall portion extends from said side wall at an angle ϕ_1 , wherein:

$$\phi_1 \leq 90^\circ - \phi_3 - \phi_4$$

where:

ϕ_1 - is the angle between said side wall and said first wall portion,

ϕ_3 - is the natural angle of repose of material to be transported in said container, and

ϕ_4 - is the cohesion of said material to be transported when wet.

× 14. (Twice Amended) A container as claimed in claim 6 wherein said first and second wall portions are symmetrical.

× 15. (Twice Amended) A container as claimed in claim 6 wherein said second wall portion is convex or concave relative to the interior of the container.

× 16. (Amended) A container as claimed in claim 6, wherein said first wall portion is aligned with the flow of material during unloading of said container.

○ 17. (Amended) A container as claimed in claim 6, wherein said ridge further includes a third wall portion between said first wall portion and said second wall portion.

○ 18. A container as claimed in claim 17 wherein said third wall portion is concave.

○ 19. A container as claimed in claim 17 wherein said third wall portion is flat or straight.

○ 20. A container as claimed in claim 19 wherein said third wall portion is parallel to said side wall.

○ 21. A container as claimed in claim 19 wherein said third wall portion is angled relative to said side wall.

○ 22. (Amended) A container as claimed in claim 17 wherein said first wall portion is equal to or longer than said third wall portion.

× 23. A container as claimed in claim 6, wherein at least one said side wall further includes a partial ridge along the top or rim of said at least one side wall, said partial ridge being formed by a fourth wall portion, said fourth wall portion being equivalent to said first wall portion.

× 24. A container as claimed in claim 23, wherein said fourth wall portion is of equal length to said first wall portion.

× 25. (Amended) A container as claimed in claim 23 wherein said partial ridge further includes a strengthening member along the periphery of said fourth wall portion, said strengthening member forming the rim of said container.

× 26. A container as claimed in claim 25, wherein said strengthening member is integrally formed within said at lease one side wall.

× 27. (Amended) A container as claimed in claim 1 wherein said base of said container includes at least one ridge extending substantially along the length of said base.

× 28. A container as claimed in claim 27 wherein said at least one ridge along said base is located about wheel or track positions of a support for said container.

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30. (Amended) A container as claimed in claim 1 for use in transportation of bulk material by road.

31. (Amended) A container as claimed in claim 1 for use in transportation of bulk material by rail.